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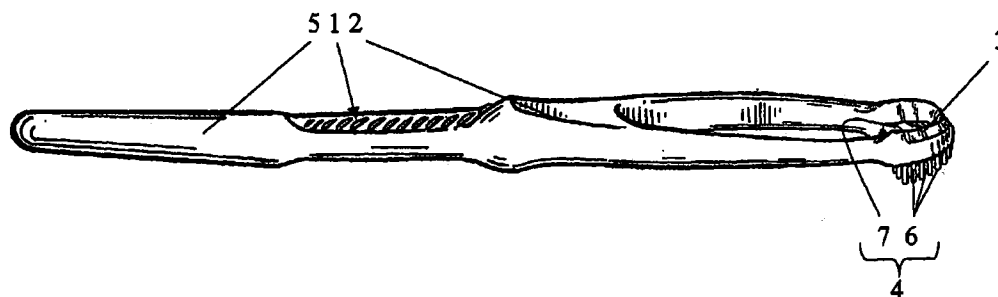
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ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: LAY-OUT IN TONGUE CLEANER



(57) Abstract: This abstract refers to a patent of a utility model for tongue cleaner, belonging to the field of mouth hygiene devices, which received disposition to provide a better use and efficiency when compared to the others, and foresees body (1) equipped with tongue cleaning device, comprised essentially of: one scraping edge (3) incorporated in the extreme curve sector of stretch (2) and designed in relation to one of the faces of this stretch (2); and of a brush (4), which acts on the tongue and is opposite to the edge (3).

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**"LAY-OUT IN TONGUE CLEANER"**

This descriptive report refers to a utility model patent for a tongue cleaner, belonging to the field of mouth hygiene devices and which has received a lay-out in order to provide a better utilization and efficiency compared to the usual ones.

For a number of reasons, mouth health is the object of great attention. To take care of this, there are innumerable resources that range from the most diverse treatments to mouth hygiene products and devices.

In this respect, the tongue is known to be the structure which accumulates the greatest quantity of bacteria in the entire oral cavity, harming both, itself and the organism as a whole, being also responsible for bad breath (halitosis). To fight this, purpose-built tongue cleaning devices are already known, comprised generally of: a stretch with geometry adequate to be used inside the mouth; an edge, incorporated in such stretch, for scraping the tongue; and a means of handle, for the user to hold the device. This kind of device, in spite of its large utilization, is not fully efficient in the removal of the severest tongue coating formations (a bacterial plaque which forms on the tongue).

In order to handle the cleaning of such severe formations, devices, which are equipped with a scraping edge and/or bristles, are already known. As it happens, devices equipped with edge e bristles have these active elements disposed in a sequence one to the other, on a same face of the device, like, e.g., the edge situated on the free tip and the bristles on a stretch next to the tip. Thus, when the user intends to use the bristles on the

tongue's rear portion, the edge is more advanced and causes sickness, nausea and cough, hindering a better performance of the operation.

Another kind of device comprehends only bristles, but both this and the kind above have respectively one and two alignments of  
5 bristles, which are insufficient for adequate coating removal. Another inconvenient of this second device is to have its stretch that is introduced in the mouth, generally, with a geometry that causes sickness, nausea and cough.

Thus, the objective of the lay-out, which is the object of this utility model patent, is to provide a device that acts efficiently in cleaning  
10 the tongue and overcomes the usual ones' inconveniences and limitations.

Another objective is to provide a device that is easy to use and does not cause, or at least decreases appreciably, sickness or nausea or cough when used.

Another objective is to provide a device that, despite  
15 providing the advantages above, is not, for this reason, of such complex construction and manufacturing as to make it uninteresting compared to the usual ones.

Another objective is to provide a device of adequate cost.

20 Considering, therefore, the problems above referred to, and with the purpose of overcoming them and aiming to meet the related objectives, a lay-out in tongue cleaner was developed, object of this utility model patent, which is comprised essentially of: an elliptical stretch that is introduced into the mouth, one tip having a scraping edge disposed on one of

the stretch's faces, and a brush area disposed on the stretch's face opposite that having an edge; and a handle that is elongated from the opposite tip of such elliptical stretch and coplanar to it.

This way of the tongue cleaner's construction provides a more efficient action, as the bristles' area, brush, enables the brushing and releasing of the bacterial plaque formed on the tongue, and the opposite edge enables the removal of it.

This way, this tongue cleaner is efficiently applied in severer cases of tongue coating formation, thus providing an advantage over the usual scrapers.

Another advantage provided by this tongue cleaner is to have a geometry developed to outstandingly prevent or decrease sickness or nausea or cough. With this purpose, the edge and the brush area are located in the free tip of the device's tip that is introduced into the mouth. This way, when such active elements are used for cleaning the tongue's rear portions, no stretch of the device is beyond these elements, preventing sickness, nausea or cough. Another characteristic of this device is to have its stretch, which is introduced into the mouth, equipped with a geometry developed taking into consideration ergonomic and elliptical aspects, in order to also prevent sickness, nausea or cough. The handle is adequate to make it easier for the user to hold the device during utilization. Further, the geometry was developed aiming also to make transport and storage easier.

In spite of the advantages provided by this tongue cleaner compared to the usual ones, it doesn't have a construction or a

manufacturing or a cost that may make it uninteresting compared to the later.

The attached drawings show the tongue cleaner layout, object of this patent, in which:

figure 1 shows it from the face having the tongue  
5 scraping edge;

figure 2 shows it from the face having the bristles  
area, brush, to brush the tongue;

figure 3 shows the device in a plan from the face  
having the bristles area;

10 figure 4 shows the device in a plan from the face  
having the scraping edge;

figure 5 shows the device from the tip having the  
bristles and the scraping edge;

figure 6 shows it with a partial cut on the tip having  
15 the scraping edge and brush area. It is shown on a side view for better  
comprehension;

figure 7 shows another cleaner realization possibility  
for a better comprehension. It is shown sideways, with a partial cut on the tip  
having two opposite scraping edges; and

20 figure 8 shows a use scheme for the tongue cleaner.

In accordance with what is illustrated by the figures  
related above, the tongue cleaner, object of this utility model patent, aims to  
brush and scrap the tongue for bacterial plaque removal and is comprised,  
essentially, of one body 1, composed of: stretch 2, which is introduced into the

mouth; device for tongue cleaning, disposed in one tip of stretch 2 and comprehended of scraping edge 3; and bristles 4; such tongue cleaner is comprised, still, of handle 5 disposed at the opposite tip of stretch 2, and coplanar to this stretch 2.

5 In this lay-out, instead of edge scraper 3 and bristles 4 being situated on the device's same face, one in a sequence to the other, as the usual solution, such scraping edge 3 and bristles 4 are disposed on opposite faces of the free curve tip of stretch 2, which is introduced into the mouth. Bristles 4, instead of being formed of some bristle alignments, 10 comprehend a bristles area forming substantially a brush. Further, stretch 2, which is introduced into the mouth, has been developed taking into consideration ergonomic aspects, due to its application, aiming to prevent sickness, nausea or cough and, with this purpose, has the shape of an elliptical ring, on whose free tip scraping edge 3 and bristles area 4 are incorporated, on 15 opposite faces, and handle 5 is incorporated on the opposite tip.

The bristles area 4 is comprised of a number of bristle tufts 6, implanted on a semi-elliptical base 7 incorporated on the tip of stretch 2.

20 The tongue cleaner has body 1 obtained from polystyrene and non-toxic pigment and nylon bristles.

Thus, the cleaner works in the following manner: The user holds it through handle 5, introduces elliptical stretch 2 into the mouth and slides first brush 4 and then edge 3 along the tongue, for bacteria formations removal.

The tongue cleaner's innovative shape, with brush and cleaning edge allows a better adaptation to lingual "V", i.e., as its tip is not very wide, it can clean in the middle of the caliciform or circumvallates papillae 20, which are located on the bottom of the tongue in a "V" shape, according to  
5 attached figure 8, besides causing less sickness.

This portion of the tongue is where tongue coating (which is the bacterial plaque responsible for halitosis origin in a huge percentage of cases) is mostly formed. This way, the active tip of the device adapts to this portion, making its cleaning easier.

10 Within the basic construction described above, the tongue cleaner, object of this utility model patent, may present modifications related to materials, dimensions, constructive details and/or functional and/or ornamental configuration, without escaping the scope of the solicited protection.

Hereunder, instead of foreseeing a tongue cleaning  
15 edge 3 and a bristles area 4, the cleaner device, as described above, has two opposite edges 3, on the respective faces of the elliptical tip of stretch 2 (figure 7).

## Claims

1)- "LAY-OUT IN TONGUE CLEANER," comprised, essentially, of a body (1),  
comprised: of stretch (2); of tongue cleaning device disposed on one tip of  
5 stretch (2); and of handle (5) disposed on the opposite tip of stretch (2), and  
coplanar to this stretch, **characterized** by the fact that the tongue cleaning  
device is comprised, essentially: of a scraping edge (3), which acts on the  
tongue, incorporated in the tip of stretch (2) and designed in relation to one of  
the faces of stretch (2); and of an area of bristles, brush, (4), which acts on the  
10 tongue and is opposite to the scraping edge (3).

2)- "LAY-OUT IN TONGUE CLEANER," according to claimed 1, it is  
**characterized** by the fact that stretch (2) is elliptical; scraping edge (3) is  
incorporated in the extreme curve sector of stretch (2).

3)- "LAY-OUT IN TONGUE CLEANER," according to claim 1, it is  
15 **characterized** by the fact that the area of the bristles, brush, (4) is comprised of  
a number of bristle tufts (6), implanted on a semi-elliptical base (7) incorporated  
in the tip of stretch (2).

4)- "LAY-OUT IN TONGUE CLEANER," according to claimed 1, it is  
**characterized** by the fact that, optionally, a scraping edge (3) is foreseen on  
20 one of the faces of the tip of stretch (2) that is introduced into the mouth, and  
another scraping edge (3) is foreseen, which replaces the brush.



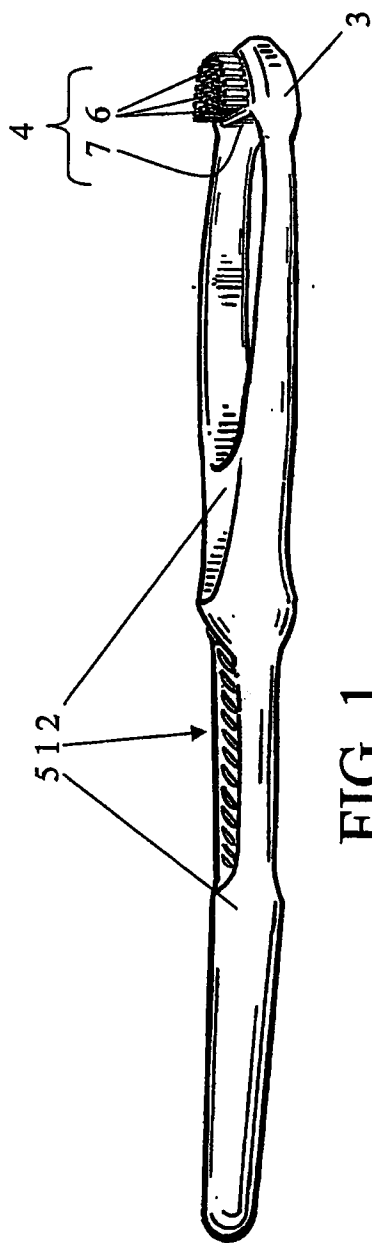


FIG. 1

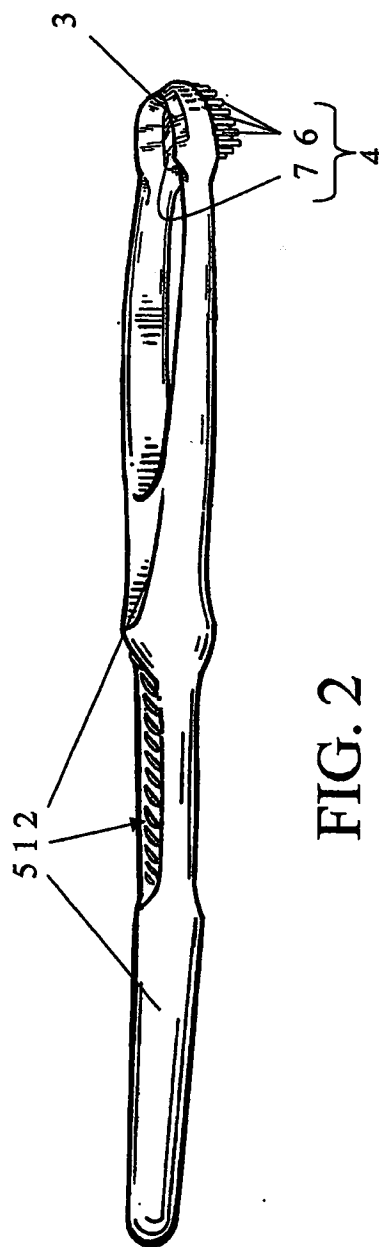


FIG. 2

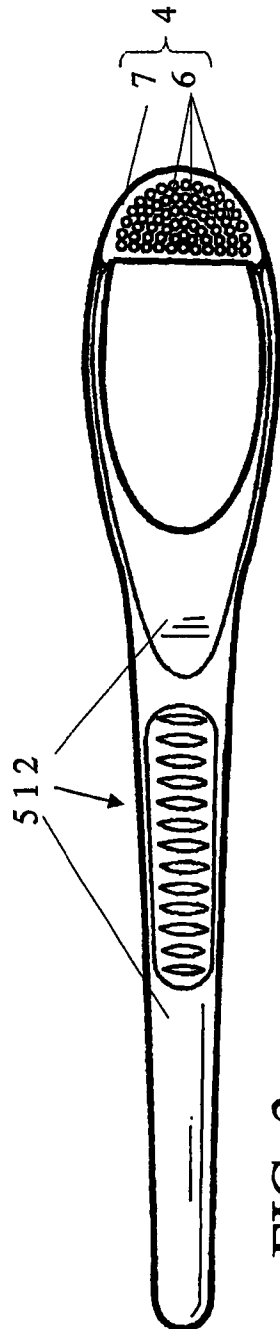


FIG. 3

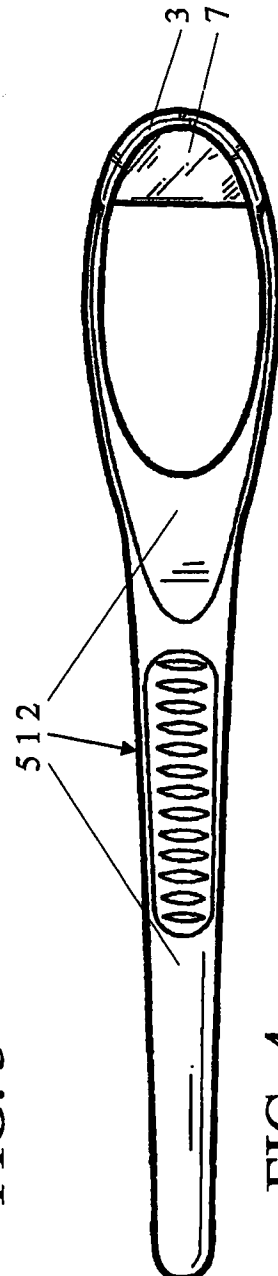


FIG. 4

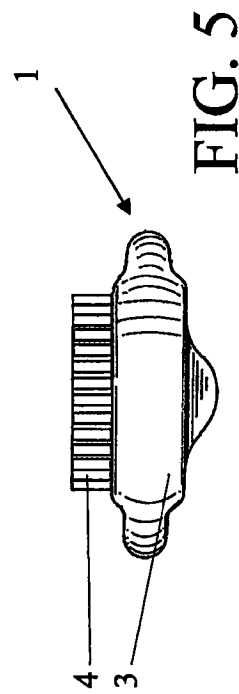


FIG. 5

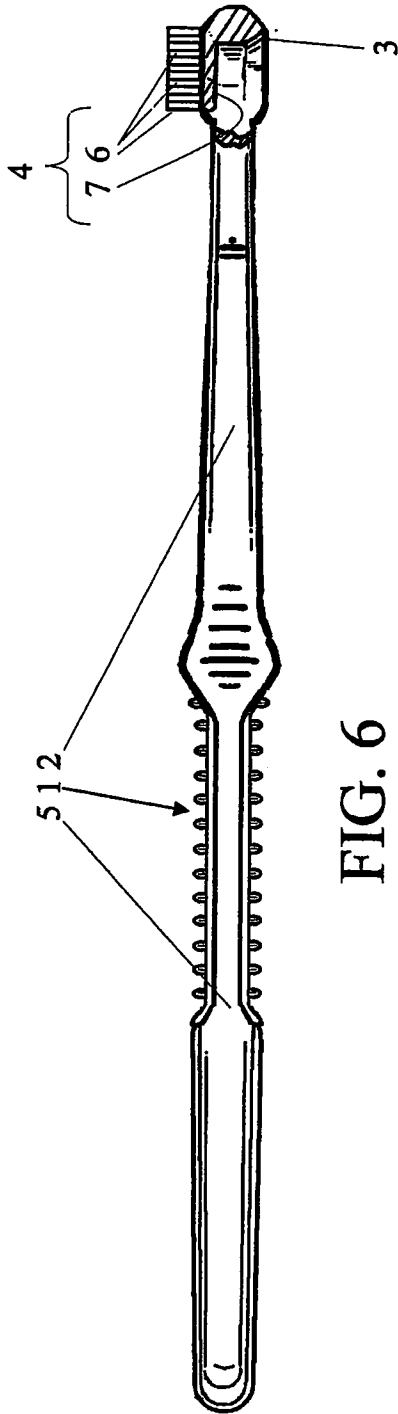


FIG. 6

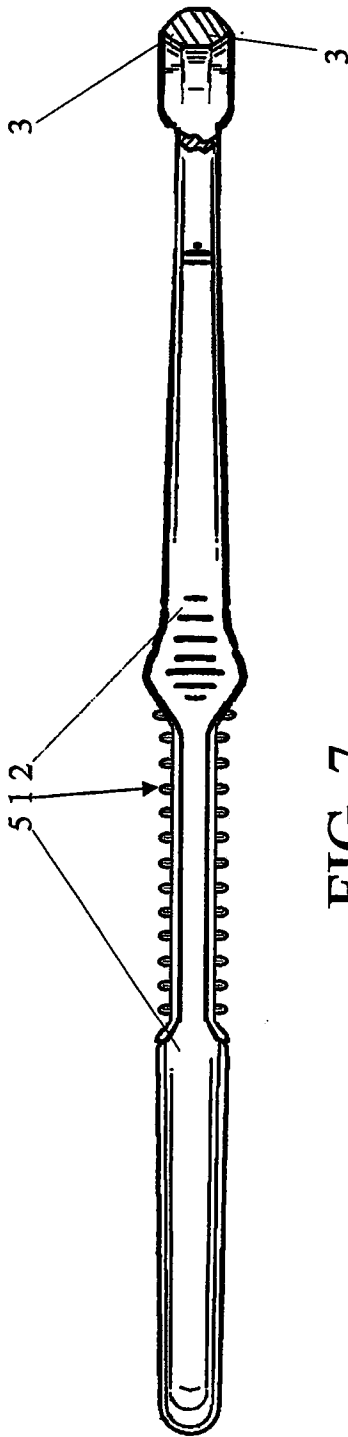


FIG. 7

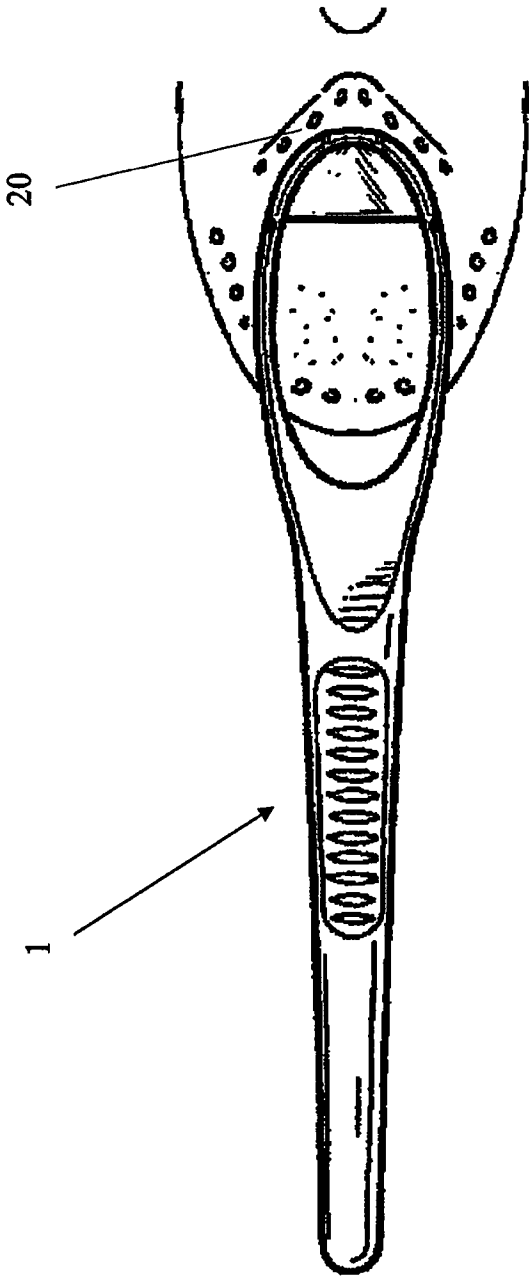


FIG. 8

# INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> <b>IPC<sup>7</sup>: A61B 17/24</b> According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) <b>IPC<sup>7</sup>: A61B, A46B</b> Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched ----- Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) <b>EPOQUE, WPI, PAJ</b>				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	US 2,574,654 A (MOORE) 13 November 1951 (13.11.1951) <i>figure 1, Column 2, lines 8-13.</i>  --	4		
X	US 5,915,433 A (HYBLER) 29 June 1999 (29.06.1999) <i>abstract, figures 3-5, column 4, lines 7-8.</i>  --	4		
A	US 5,980,541 A (TENZER) 9 November 1999 (09.11.1999) <i>abstract, figures 1, 2, 4, 8, column 4, lines 8-47, column 5, lines 32-45, claims 1-4.</i>	1-3		
X	--	4		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top; border: none;">           * Special categories of cited documents:            "A" document defining the general state of the art which is not considered to be of particular relevance            "E" earlier application or patent but published on or after the international filing date            "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)            "O" document referring to an oral disclosure, use, exhibition or other means            "P" document published prior to the international filing date but later than the priority date claimed         </td> <td style="width: 50%; vertical-align: top; border: none;">           "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention            "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone            "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art            "&amp;" document member of the same patent family         </td> </tr> </table>			* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family
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Date of the actual completion of the international search <b>1 July 2005 (01.07.2005)</b>		Date of mailing of the international search report <b>28 July 2005 (28.07.2005)</b>		
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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/BR 2005/000068

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	EP 1 350 474 A1 (PERI-DENT LIMITED) 8 October 2003 (08.10.2003) <i>abstract, paragraphs [0005]-[0008], [0011], figures 1-14, claims 1, 4, 9.</i> --	1-4
A	US 6,023,315 A (LIEBEL) 7 March 2000 (07.03.2000) <i>abstract, column 2, line 66 - column 3, line 6, claims 1-12, figure 5.</i> ---	1-4
A	DE 197 28 754 A1 (PFEFFER) 7 January 1999 (07.01.1999) <i>claims 1-7.</i> ----	1-4

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Information on patent family members

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